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Corps of Engineers' Training Needs to Implement MILCON Transformation

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Training Needs to Implement MILCON Transformation

- District staff – Overview of codes and standards for situational awareness
- Construction staff – provide a basic understanding of codes and standards, initial awareness training on ICC codes and National Electric Code, testing, and provide specific training on Type III and V construction.
- Designers and plan reviewers – Provide review of ICC codes, National Electric Code, specific training on Type III and V construction, and Plan Reviewers' training.

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Current Training Program adopted by SWD

- Take a self-paced, self-taught training by reading training modules posted on Southwestern Division's website or an FTP site, in the following order:
  1. QA/QC Responsibilities
  2. D-B contract administration
  3. Basic Code Overview
  4. Wood 101 - Basics of Wood Characteristics and The Use of Lumber in Construction
  5. International Building Code Overview
  6. International Plumbing Code Overview
  7. International Mechanical Code Overview
  8. International Fuel Gas Code
  9. National Electrical Code Overview
- The above self-taught modules take approximately 2-1/2 to 3 days to complete, in total.

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Current Training Program adopted by SWD (cont.)

- Second, a more specific on-site training is provided by an ICC certified training organization, on the following:
  - International Building Code – mainly on occupancy classifications, types of construction, life safety, fire protection, access and egress.
  - Specific IBC training to the occupancy groups that the field will be dealing with in Army installations.
  - Specific IBC training on Type III and V construction.
- The above is a 5-day training class.

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Current Training Program adopted by SWD for Construction Staff - D-B Module

- The D-B contract administration module includes the following topics:
  - Why use design-build?
  - Comparison between D-B-B and D-B
  - Benefits of Design-Build
  - Designer's Role
  - Contractual lines
  - The D-B Contract
  - Administration of Design phase
  - Initial Conferences
  - Submittals
  - Design review
  - Quality Control and Quality Assurance
  - Schedule Management
  - Order of Precedence
  - Sources for Changes and Change Management

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Current Training Program adopted by SWD for Construction Staff - Basic Code Overview Module

- The Basic Code Overview module includes the following:
  - Better understanding of the development and role of model codes and standards in the building construction industry.
  - Define code, model code and building code
  - Explain the purpose of codes
  - Identify the two different types of codes
  - Identify uses of codes
  - Define standards and explain how they are developed
  - Understand the Adoption of the Code
  - Understand the role of ICC
  - Define construction documents
  - Understand code recommended inspections

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Current Training Program adopted by SWD for Construction Staff - IBC Module

- The International Building Code Overview module includes the following:
  - An overview of most of the Chapters in the IBC, including Chapter 1 which lists recommended inspections, Chapter 3 for Occupancy Classification, Chapter 6 for Construction Types, and Chapter 17 which lists recommended Special Inspections.
  - Heavy on Chapter 23 – Wood

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Current Training Program adopted by SWD for Construction Staff - Other Code modules

- The International Plumbing Code
- International Mechanical Code
- International Fuel Gas Code
- The National Electric Code module includes an overview of requirements in the code which the field offices may encounter on a daily basis.
- Training for designers and plan reviewers would be similar but only view the modules that apply to their disciplines.

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Estimated Cost for Training by BFCA

- The Building and Fire Code Academy (BFCA) is an ICC certified training organization. The estimated cost for them to perform a 5 day training session is as follows:

  5-day training = $7,000 for 25 people
  Travel & per diem = $2,000
  20 people more = $450 ($25/person)
  $9,450 (45 people)

  (The above equates to $210 per person.)
- Two different trainings modules can be developed. One for designers and plan reviewers, and another for construction personnel.
- This training is conducted by BFCA and can also be conducted by another ICC certified training organization, including ICC itself.

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Plan Reviews by a Third Party

- A third party such as BFCA, can also be contracted to perform a code compliance plan review. This can be used to give an indication of how good a code compliance review we are performing.
- Using BFCA as an example, they will perform code compliance plan reviews within 9 business days of receipt of the plans. Their rates are as follows:
- Building Review 100,000 Cubic Feet = $547.70
- Building Review 200,000 Cubic Feet = $711.55
- Building Review over 200,000 Cubic Feet = $838.00 + $8.00 per 10,000 Cubic Feet in excess of 200,000 CF.
- Plumbing, Mechanical & Electrical Review for 200,000 Cubic Feet = $1,423.10
- Plumbing, Mechanical & Electrical Review for over 200,000 Cubic Feet = Building Fee X 2

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Example Estimated Cost for Plan Reviews by BFCA

- 200,000 cubic foot building
  - -> Building = $ 711.55
  - -> MEP = $1,423.10
  - Total = $2,134.65

The above is for review of full design construction documents for code compliance.

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ICC Web-based Training

- http://www.iccsafe.org/training/campus/
- ICC Campus Online is the virtual training environment of the ICC. The campus allows individuals to select topics they are interested in and the time they want to take to go thru the training.
- Every course on the ICC Campus Online is available to the student for 99 days after registration.

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ICC & BFCA

- Benefits of membership with ICC
  1. Technical support
  2. Free code books
  3. Code news
  4. Be a part of code development
  5. Special discounts
  6. Members discounts on training
- Benefits of BFCA
  1. Training, code inspections, and plan reviews.
  2. Technical support - If you attend any of their classes, you can call on them with any code related questions.
  3. They have over 30 technical people to answer questions, with at least two of them with Master Code Professional Certification which is the highest level of certification in ICC's program.